



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1889; Project Identifier MCAI-2023-00738-E; Amendment 39-22623; AD 2023-24-06]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2021-25-04 for certain Rolls-Royce Deutschland Ltd & Co KG (RRD) Model Trent 1000 engines. AD 2021-25-04 required operators to revise the airworthiness limitations section (ALS) of their existing approved continuous airworthiness maintenance program by incorporating the revised tasks of the applicable time limits manual (TLM) for each affected model turbofan engine. Since the FAA issued AD 2021-05-04, the manufacturer revised the TLM to introduce new or more restrictive tasks and limitations and associated thresholds and intervals for life-limited parts, which prompted this AD. This AD requires revising the ALS of the operator's existing approved engine maintenance or inspection program, as applicable, to incorporate new or more restrictive tasks and limitations and associated thresholds and intervals for life-limited parts, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1889; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For service information identified in this final rule, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this material on the EASA website at ad.easa.europa.eu.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1889.

FOR FURTHER INFORMATION CONTACT: Sungmo Cho, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7241; email: sungmo.d.cho@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2021-25-04, Amendment 39-21847 (86 FR 71129, December 15, 2021) (AD 2021-25-04). AD 2021-25-04 applied to RRD Model Trent 1000-AE3, Trent 1000-CE3, Trent 1000-D3, Trent 1000-G3, Trent 1000-H3, Trent 1000-J3, Trent 1000-K3, Trent 1000-L3, Trent 1000-M3, Trent 1000-N3, Trent 1000-P3, Trent 1000-Q3, and Trent 1000-R3 engines. AD 2021-25-04, which was prompted by EASA AD 2020-0243, dated November 5, 2020 (EASA AD 2020-0243), required revising the ALS of the operator's existing approved engine maintenance or inspection program, as applicable, to incorporate new or more restrictive tasks and limitations and associated thresholds and intervals for life-limited parts. The FAA issued AD 2021-25-04 to prevent the failure of critical rotating parts, which could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

Since the FAA issued AD 2021-25-04, EASA superseded EASA AD 2020-0243 with EASA AD 2022-0247, dated December 14, 2022 (EASA AD 2022-0247) and then superseded EASA AD 2022-0247 with EASA AD 2023-0115, dated June 7, 2023 (EASA AD 2023-0115).

The NPRM published in the Federal Register on September 18, 2023 (88 FR 63885); corrected on September 27, 2023 (88 FR 66316). The NPRM was prompted by EASA AD 2023-0115 (also referred to as the MCAI), issued by EASA, which is the Technical Agent for the Member States of the European Union. The MCAI states that the manufacturer published a revised engine TLM to introduce new or more restrictive tasks and limitations and associated thresholds and intervals for life-limited parts.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1889.

In the NPRM, the FAA proposed to require revising the ALS of the operator's existing approved engine maintenance or inspection program, as applicable, to incorporate new or more restrictive tasks and limitations and associated thresholds and intervals for life-limited parts.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from The Boeing Company (Boeing). Boeing supported the NPRM without change.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed EASA AD 2023-0115, which specifies procedures for operators to revise the ALS of the existing approved engine maintenance or inspection program, as applicable, to incorporate new or more restrictive tasks and limitations and associated thresholds and intervals for life-limited parts.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Differences Between this AD and the MCAI

Where paragraph (3) of EASA AD 2023-0115 specifies revising the approved Aircraft Maintenance Programme within 12 months after the effective date of EASA AD 2023-0115, this AD requires revising the ALS of the existing approved engine maintenance or inspection program, as applicable, within 90 days after the effective date of this AD.

This AD does not require compliance with paragraphs (1), (2), (4), and (5) of EASA AD 2023-0115.

Costs of Compliance

The FAA estimates that this AD affects 2 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Revise the ALS	1 work-hours x \$85 per hour = \$85	\$0	\$85	\$170

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive 2021-25-04, Amendment 39-21847 (86 FR 71129, December 15, 2021); and

- b. Adding the following new airworthiness directive:

2023-24-06 Rolls-Royce Deutschland Ltd & Co KG: Amendment 39-22623; Docket

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-25-04, Amendment 39-21847 (86 FR 71129, December 15, 2021).

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG Model Trent 1000-AE3, Trent 1000-CE3, Trent 1000-D3, Trent 1000-G3, Trent 1000-H3, Trent 1000-J3, Trent 1000-K3, Trent 1000-L3, Trent 1000-M3, Trent 1000-N3, Trent 1000-P3, Trent 1000-Q3, and Trent 1000-R3 engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7200, Engine (Turbine/Turboprop).

(e) Unsafe Condition

This AD was prompted by the manufacturer revising the engine time limits manual (TLM) life limits of certain critical rotating parts and direct accumulation counting data files. The FAA is issuing this AD to prevent the failure of critical rotating parts. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified in paragraph (h) of this AD: Perform all required actions within the compliance times specified in, and in accordance with, European Union

Aviation Safety Agency (EASA) AD 2023-0115, dated June 7, 2023 (EASA AD 2023-0115).

(h) Exceptions to EASA AD 2023-0115

(1) Where EASA AD 2023-0115 defines the AMP as the approved Aircraft Maintenance Programme containing the tasks on the basis of which the scheduled maintenance is conducted to ensure the continuing airworthiness of each operated engine, this AD defines the AMP as the aircraft maintenance program containing the tasks on the basis of which the scheduled maintenance is conducted to ensure the continuing airworthiness of each operated airplane.

(2) Where EASA AD 2023-0115 refers to its effective date, this AD requires using the effective date of this AD.

(3) This AD does not require compliance with paragraphs (1), (2), (4), and (5) of EASA AD 2023-0115.

(4) Where paragraph (3) of EASA AD 2023-0115 specifies revising the approved AMP within 12 months after the effective date of EASA AD 2023-0115, this AD requires revising the airworthiness limitations section of the existing approved engine maintenance or inspection program, as applicable, within 90 days after the effective date of this AD.

(5) This AD does not adopt the Remarks paragraph of EASA AD 2023-0115.

(i) Provisions for Alternative Actions and Intervals

After performing the actions required by paragraph (g) of this AD, no alternative actions and associated thresholds and intervals, including life limits, are allowed unless they are approved as specified in the provisions of the “Ref. Publications” section of EASA AD 2023-0115.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520 Continued Operational Safety Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the AIR-520 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact Sungmo Cho, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7241; email: sungmo.d.cho@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2023-0115, dated June 7, 2023.

(ii) [Reserved]

(3) For service information identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email:

ADs@easa.europa.eu; website: easa.europa.eu. You may find this EASA AD on the EASA website at ad.easa.europa.eu.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on November 29, 2023.

Victor Wicklund,
Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

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